

Remarks

Favorable reconsideration of this application is requested in view of the above amendments and in light of the following remarks and discussion.

Claims 1-5 and 8 are pending in the application. New dependent Claim 8 is added by way of the present response. Claim 6 is cancelled without prejudice or disclaimer.

In the Office Action the drawings are objected to, and independent Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Publication No. 60-128012 to Katsuhara or Japanese Publication No. 10-226221 to Harada in view of U.S. Patent No. 4,821,792 to Bednarek and either Japanese Publication No. 58-221714 to Kojima et al. (Kojima) or U.S. Patent No. 5,309,731 to Nonoyama et al. (Nonoyama).

As stated above the drawings are objected to. In response, as shown in the attached replacement sheet, Figures 3 and 4 are amended to be labeled "Background Art," and Figure 3 is amended to include the term "air" in place of Japanese characters, in accordance with the Examiner's request. Although not required under 37 C.F.R. § 1.121(d), enclosed for the Examiner's convenience is a marked-up copy of Figures 3 and 4 submitted in accordance with 37 C.F.R. § 1.121(d)(1). It is requested that the objection to the drawings be withdrawn.

As stated above independent Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Katsuhara or Harada in view of Bednarek and either Kojima or Nonoyama. It is requested that the rejection be withdrawn for the following reasons.

The present invention is directed to a vehicular air conditioner. Independent Claim 1 recites an engine cooling water system connected to a coolant heat exchanger of a heat pump. The engine cooling water system includes a coolant bypass valve connected between a primary side flow path and a secondary side flow path for engine cooling water to bypass the coolant heat exchanger. The valve is disposed such that when a damper fully opens a full quantity of the engine cooling water flows to the secondary side flow path.

The Office Action relies on Kojima to disclose the claimed features of a coolant bypass valve connected between a primary side flow path and a secondary side flow path for engine cooling water to bypass a coolant heat exchanger. It is submitted, however, that Kojima discloses the water valve 13 driven by the water valve driving part 26, controlled by the water valve driving circuit. Kojima does not disclose the water valve 13 connected between primary and secondary side flow paths for engine cooling water to bypass the heater core 5. Rather, as discussed on page 10, lines 15-18, the water valve driving part 26 adjusts the degree of valve opening of the water valve 13 (i.e., adjusts the degree to which the water flows through the heater core 5), rather than adjusting the water valve 13 such that engine cooling water bypasses the heater core 5.

It is also noted that Kojima shows that the bypass valve 13 and the damper 7 are controlled by separate driving circuits 21 and 24, respectively. It is asserted, however, that advantages of the present invention are provided by controlling the claimed damper and engine cooling water in association with each other. It is through the damper and engine cooling water of the claimed invention controlled in association that provide superior cooling performance, which would not be provided by separately controlling the bypass valve 13 and the damper 7 separately from each other (i.e., not in association with each other).

In view of the above discussion, it is asserted that the claimed locations of the coolant bypass valve are structural limitations.

For these reasons it is requested that the rejection of independent Claim 1 under 35 U.S.C. § 103(a) be withdrawn, and the allowance of independent Claim 1 is requested.

Claims 2-5 and 8 are allowable for the same reasons as independent Claim 1 from which they depend, as well as for their own features. For these reasons, the allowance of dependent Claims 2-5 and 8 is requested.

Application No. 10/644,728
Reply to Office Action of January 31, 2005

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-5 and 8 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

Customer Number

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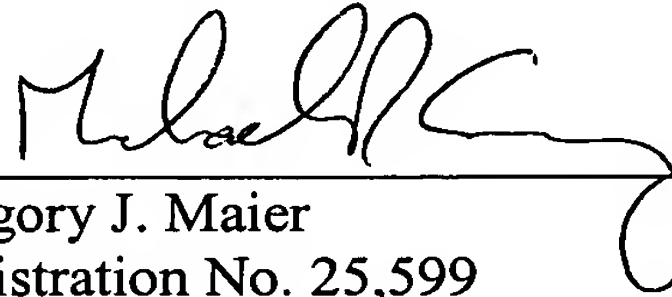
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(OSMMN 06/04)

Respectfully submitted,

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Docket No.: 241563US3CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION: Toyotaka HIRAO, et al.

SERIAL NO.: 10/644,728

GAU: 3753

FILED: August 21, 2003

EXAMINER: John K. Ford

FOR: VEHICULAR AIR CONDITIONER

LETTER SUBMITTING REPLACEMENT DRAWING SHEET(S)

COMMISSIONER FOR PATENTS
Alexandria, VA 22313

SIR:

Responsive to the below indicated communication, the following drawing sheets are submitted herewith:

☒ 1 Replacement Drawing Sheet

☒ 1 Annotated Drawing Sheet

☒ Official Action dated January 31, 2005

☐ Notice of Allowance/Issue Fee dated _____

☐ Other dated _____

The changes and/or modifications made include the following:

The replacement Figs. 3 and 4 include changes required by the PTO Communication. A marke-up version is also included per request of the Examiner.

Respectfully Submitted,

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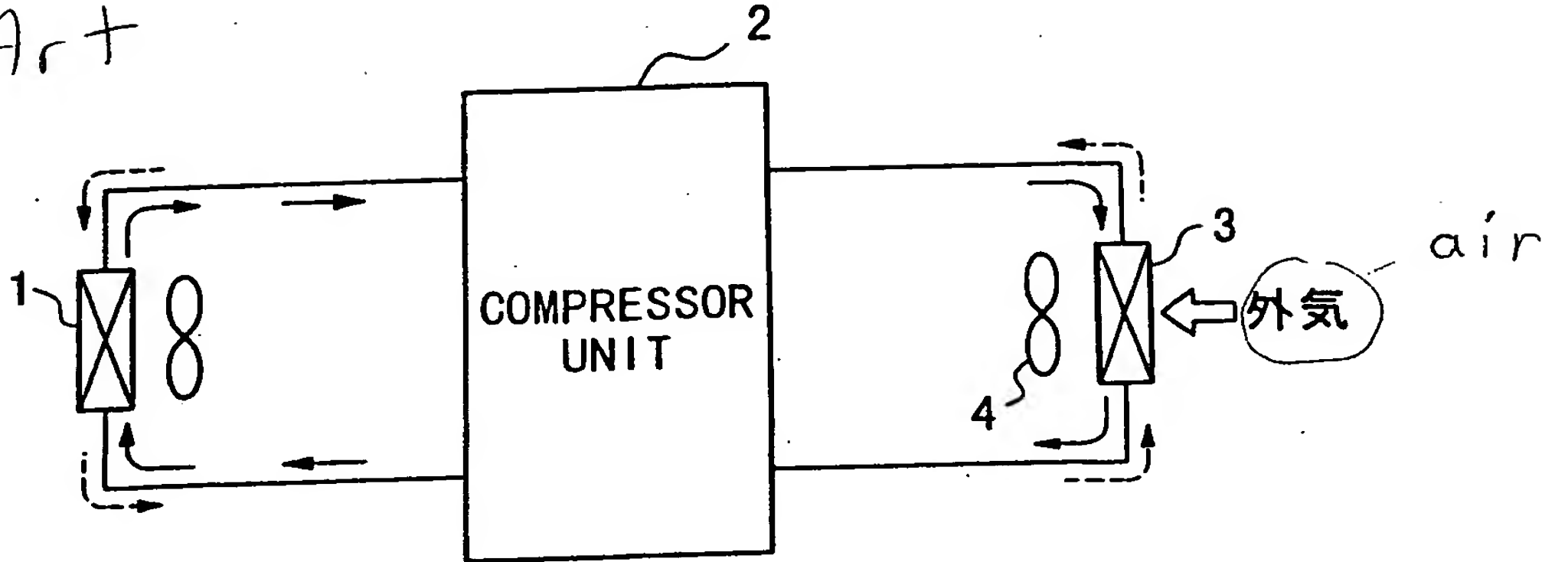
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Background Art

FIG.3



--- ; REFRIGERANT FLOW DIRECTION AT TIME OF COOLING/DEHUMIDIFYING OPERATION

— ; REFRIGERANT FLOW DIRECTION AT TIME OF HEATING OPERATION

FIG.4

Background Art

